

## AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (presently amended) ~~Multistage~~ A multistage centrifugal compressor comprising at least one stage 10 which, in turn, comprises a lower half-tank 11, and an upper half-tank 12 to contain the at least one stage, a series of lower half-diaphragms 16, a shaft 13 equipped with a series of rotors 14, a series of upper half-diaphragms 18, a lower suction half-diaphragm 51, and an upper suction half-diaphragm 52, characterized in that wherein the lower suction half-diaphragm 51 and the upper suction half-diaphragm 52 include a lower portion 71 and an upper portion 72, respectively, suitable for being coupled with the lower half-diaphragms 16 and with the upper half-diaphragms 18, respectively, to form a first pile 41 of lower half-diaphragms 16 and a second pile 42 of upper half-diaphragms 18, respectively.
2. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~ wherein each of the lower portion and the upper portion is a said shaped cylindrical section 71 ~~comprises~~ comprising a series of annular housings 59 suitable for being coupled with ~~lower the lower and the upper~~ half-diaphragms 16 and in that said shaped cylindrical section 72 ~~comprises a series of annular housings 60~~ respectively, for balancing the axial stress received during the functioning of the multistage centrifugal compressor.
3. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~ wherein each of the lower half-diaphragm and upper half-diaphragm 16 includes a lower section and an upper section, respectively, 81 suitable for being respectively coupled with an internal annular housing 59 of the relative ~~lower~~ suction half-diaphragm 51, and in that each upper half diaphragm 18 includes a section 82 suitable for being respectively coupled with an internal housing 60 of the relative upper suction half diaphragm 52.

4. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein each of the lower suction half-diaphragm and the upper suction half-diaphragm 51 comprises a series of radial shaped grooves ~~61 and,~~ correspondingly, the upper suction half diaphragm 52 comprises a series of radial shaped grooves 62.

5. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein each of the lower suction half-diaphragm and the upper suction half-diaphragm 51 includes a section with a shaped ~~basis~~base 63, open at the ~~center~~centre and, correspondingly, the upper suction half diaphragm 52 includes a section with a shaped basis 64, open at the centre.

6. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein the lower suction half-diaphragm 51 and the upper suction half-diaphragm 52 respectively include supporting feet to adapt the multistage centrifugal compressor to the configuration with a horizontal opening of the tank.

7. (new) The multistage centrifugal compressor according to claim 1, wherein each of the first pile and the second pile, when combined with the shaft, allow the compressor to be assembled horizontally.